National Transportation Sufety Board
FACTUAL REPORT
ANIATION

NTSB ID: CEN10FA019 Aircraft Registration Number: N3234G

Occurrence Date: 10/14/2009 Most Critical Injury: Fatal

Occurrence Type: Accident Investigated By: NTSB

Location/Time

Nearest City/Place
Tahlequah

State
OK

74464

Distance From Landing Facility:

Time Zone
CDT

Time Zone
CDT

Aircraft Information Summary

Aircraft Manufacturer Model/Series Type of Aircraft
ROBINSON HELICOPTER R22 BETA Helicopter

Revenue Sightseeing Flight: No

Air Medical Transport Flight: No

Narrative

Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:

HISTORY OF FLIGHT

On October 14, 2009, approximately 0450 central daylight time, a Robinson Helicopter R22 Beta, N3234G, operated by a non-instrument rated private pilot, was destroyed when it impacted terrain near Tahlequah, Oklahoma. A post impact fire ensued. Night instrument meteorological conditions prevailed at the time of the accident. The personal flight was being conducted under the provisions of Title 14 Code of Federal Regulations (CFR) Part 91 without a flight plan. The private pilot and his passenger were fatally injured. The flight departed the pilot's private residence approximately 0445 and was en route to Tahlequah Municipal Airport (KTQH), Tahlequah, Oklahoma.

According to family and friends, the pilot had been up all night watching movies. The pilot intended to fly to KTQH to meet a friend, hanger his helicopter, and go hunting. The helicopter never arrived and the friend departed the airport without reporting the overdue helicopter. Family members of the passenger filed a missing persons report on the afternoon of October 15, 2009, and the wreckage was located from the air the morning of October 16, 2009.

PERSONNEL INFORMATION

The pilot, age 26, held a private pilot certificate with a rotorcraft helicopter rating issued on July 31, 2009. He was issued a Third Class Airman Medical and Student Pilot certificate on April 28, 2008. The certificate contained no limitations.

The pilot's flight log was not located in the wreckage and the pilot's family was not aware of the location of the flight log. At the time of application for the airman medical certificate on April 28, 2008, the pilot reported a total flight time of 21 hours. According to the Federal Aviation Administration (FAA), the pilot received his private pilot certificate on July 31, 2009. At the time of application for this certificate, the pilot reported a total flight time of 85 hours, all of which were logged in the Robinson R22. The application reflected 3.5 hours of night instruction and zero hours of instrument training.

A review of FAA records revealed that a letter of investigation was sent to the pilot on September 2, 2009. The letter alleged that the pilot had provided "false or fraudulent information" on his medical certificate application dated April 28, 2008, and failed to report a motor vehicle action within 60 days as required by Federal Aviation Regulations. The letter discussed three separate alcohol-related motor vehicle actions that were recorded on the pilot's driving record. The dates of these offenses were July 14, 2003, January 26, 2004, and March 9, 2009.

According to the FAA, the pilot had not responded to the letter or provided further evidence or a statement regarding the letter. The FAA was in the process of initiating an enforcement action review when the accident occurred.

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Narrative (Continued)

AIRCRAFT INFORMATION

The accident helicopter, a Robinson Helicopter R22 Beta (serial number 4114), was manufactured in 2007. It was registered with the FAA on a standard airworthiness certificate for normal operations. A Lycoming O-360-J2A engine, rated at 145 horsepower, powered the helicopter.

The helicopter was registered to Trevor Noble, Terry Noble, and Robert Koudelka. The original maintenance records were not in the wreckage. Trevor Noble and Robert Koudelka had both been fatally injured in separate aviation accidents on November 5, 2007, and November 2, 2008, respectively. Terry Noble could not be located. The pilot's family had no knowledge as to the location of the maintenance records. A mechanic with Sevier County Choppers came forward and provided copies of the maintenance entries from maintenance performed on the accident helicopter. According to these copies, the most recent maintenance conducted on the helicopter was a 100-hour inspection, which was conducted in accordance with the R22 maintenance manual. This 100-hour inspection was completed on July 27, 2009, at an aircraft total time of 1,542.7 hours.

METEOROLOGICAL CONDITIONS

Infrared satellite imagery of southeastern Oklahoma displayed clouds directly over the accident site. Doppler weather radar in Fort Smith, Arkansas, depicted no precipitation returns in the accident area at the time of the accident.

The National Weather Service (NWS) had issued AIRMET (Airman's Meteorological Information) Sierra for instrument flight rules and mountain obscuration for the accident helicopter's area of flight. Ceilings below 1,000 feet, visibility below three miles, and precipitation, including mist, were forecast.

The aviation area forecast for Oklahoma, issued by the NWS the day of the accident, forecasted overcast conditions at 1,500 feet with cloud tops at 6,000 feet, and visibility between three and five miles restricted by mist.

The closest official weather observation station was Tahlequah Municipal Airport (KTQH), Tahlequah, Oklahoma, located three nautical miles (nm) north of the accident site. The elevation of the weather observation station was 874 feet mean sea level (msl). The routine aviation weather report (METAR) for KTQH, issued at 0432, reported winds calm, visibility, five miles, sky condition overcast at 400 feet, temperature 13 degrees Celsius (C), dew point minus 12 degrees C, altimeter, 30.00 inches of Mercury (Hg).

The next closest official weather observation station was Davis Field Airport (KMKO), Muskogee, Oklahoma, located 22 nm southwest of the accident site. The METAR for KMKO, issued at 0453, reported winds 350 degrees at seven knots, visibility, 10 miles, sky condition overcast at 400 feet, temperature 12 degrees Celsius (C), dew point minus 12 degrees C, altimeter, 30.03 inches of Hg.

Several witnesses in the immediate vicinity of the departure location reported the weather as cold, low overcast skies with limited visibility due to light rain and mist. One witness stated that she was able to see stars the morning of the accident. She commented that it was common for the weather to be good at her house and poor everywhere else.

There was no record that the pilot obtained an approved weather briefing from the FAA Flight Service Station or Direct User Access Terminal System (DUATS).

WRECKAGE AND IMPACT INFORMATION

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The accident scene was located adjacent a small running stream and approximately $\frac{1}{2}$ mile from Hawkins Mountain, in open terrain vegetated with grass. The accident site was at an elevation of 800 feet msl and the helicopter impacted on a magnetic heading of 105 degrees.

Two adjacent ground scars were identified as the initial point of impact. The left ground scar measured three feet four inches long, one foot deep, and one foot wide. The scar was angular with its depth and was consistent with a main rotor strike. The right ground scar was located six feet to the right of the left ground scar. It measured four feet at its widest point and was five feet six inches in length. The dirt within the scar was pushed in the direction of the main wreckage. Portions of the right skid were embedded into the ground adjacent the right ground scar.

Plexiglas, the front and aft cross tubes, engine hoses and belts, broken fiberglass, torn metal, seat cushions, fragments from both doors, fragments of the instrument panel, and personal effects were located within the debris field.

A second ground scar was identified in the debris field, six feet east of the initial impact point. This scar measured seven feet three inches in length and was three inches deep and five inches at its widest point. A third ground scar was located approximately 170 feet east of the second ground scar. This scar measured eight feet five inches long, five inches deep, and was 18 inches at its widest point.

The main wreckage was located approximately 30 feet east of the third ground scar. The main wreckage consisted of the fuselage, main rotor, mast and transmission assembly, engine and fan assembly, tail boom, and tail rotor. The helicopter came to rest on its right side. The fuselage and main cabin area were charred, melted, and partially consumed by fire. Both fuel tanks were crushed, had been compromised, and exhibited exposure to heat and fire.

The tail boom was crushed and bent downward. A separation area was noted along a rivet line four feet inboard from the tail rotor gearbox. The tail rotor driveshaft was continuous from the gearbox forward to the flex coupling. The pitch control links were continuous. The blades on the tail rotor were arbitrarily labeled "A" and "B" for identification purposes only. Blade A exhibited a small tear on the trailing edge and blade B was unremarkable.

The mast and main rotor blades remained attached to the transmission and fuselage structure. Both main rotor blades were bent; one was bent 90 degrees and the second was bent 180 degrees opposite their design-mounted direction, and were torn, mangled, and exhibited exposure to heat and fire. The flight controls, including the collective and cyclic exhibited multiple separation points due to the fire and impact damage. The collective was down.

The engine remained attached to the fuselage and was removed for examination purposes. The bottom bank of spark plugs was removed and the engine was rotated through, by hand, at the fan. The engine rotated freely without resistance or binding. Gear train continuity was noted at the accessory housing. Tactile compression was noted on all four cylinders. Valve covers were removed on the 1/3 side of the engine and valve and rocker arm movement was noted. The engine cylinders were examined by use of a battery powered bore scope. The cylinders exhibited normal signs of operation. Both magnetos were removed and rotated by hand. Spark was noted at each lead. Both fuel and oil screens were found free of contaminants.

An examination of the caution panel bulbs revealed normal bulb signatures. The clutch bulb was stretched which, according to Robinson Helicopter, is consistent with the impact dynamics of the accident.

MEDICAL AND PATHOLOGICAL INFORMATION

The Office of the Chief Medical Examiner performed the autopsy on October 17, 2009, as authorized

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Narrative (Continued)

by the Office of the Chief Medical Examiner - Eastern Division, Tulsa, Oklahoma. The autopsy concluded that the cause of death was "internal injuries due to blunt force trauma."

During the autopsy, specimens were collected for toxicological testing performed by the FAA's Civil Aerospace Medical Institute (CAMI), Oklahoma City, Oklahoma (CAMI Reference #200900245001). Toxicology staff at CAMI noted that paperwork accompanying toxicology samples on the pilot indicated the blood source to be "RT. PLEURAL SPACE." Testing of the blood detected 20.92 ug/ml Acetaminophen, 0.125 ug/ml Amphetamine, 0.025 ug/ml Doxylamine, 1.338 ug/ml Methamphetamine, 2.077 ug/ml Norpropoxyphene, 0.49 ug/ml Propoxyphene, Dextromethorphan, and Dextrorphan. Testing of the liver tissue detected 0.281 ug/ml Amphetamine, 2.458 ug/ml Methamphetamine, 15.501 ug/ml Norpropoxyphene, 3.039 ug/ml Propoxyphene, Dextromethorphan, Doxylamine, and Dextrorphan.

A review of the pilot's dental records indicated that the pilot was prescribed a combination of propoxyphene and acetaminophen for pain following a tooth extraction and a tooth repair performed the day prior to the accident. The pilot's April 28, 2008, application for 3rd Class Airman Medical and Student Pilot Certificate indicated "No" in response to "Do You Currently Use Any Medication" and to all items under /*o\215Medical History," including specifically "Substance dependence or failed a

drug test ever, or substance abuse or use of illegal substance in the last 2 years," "history of any conviction(s) involving driving ... while under the influence of alcohol or a drug; or ... actions involving an offense(s) which resulted in the denial, suspension, cancellation, or revocation of driving privileges ...," and "History of nontraffic convictions (misdemeanors or felonies)."

ADDITIONAL INFORMATION

Federal Aviation Regulations

Title 14 CFR Part 61.15(c, d, and e) required that pilots provide a written report of each motor vehicle action, which was a result of operating a vehicle while under the influence of drugs or alcohol, within 60 days of the occurrence. Title 14 CFR Part 67.403 prohibits pilots from making false statements on their medical certificate application.

Robinson Pilot Operating Handbook

In section 2 - Limitations, of the R22 Pilot Operating Handbook, visual flight rules operations at night are permitted only when visual reference can be maintained due to object illumination provided by ground or adequate celestial illumination. According to Robinson Helicopter, flight by reference to the instruments is not approved; day or night.

Updated on Apr 8 2010 11:01AM

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AVIATION

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AVIATION	Occurr	urrence Type: Accident									
Landing Facility/Approach In	formation										
Airport Name	irport ID:	Airport Elevation	Runway Used R		Runwa	Runway Length F		way Width			
		Ft. MSL	. N/A	N/A							
Runway Surface Type:									<u> </u>		
Runway Surface Condition:											
Approach/Arrival Flown: NONE	Ī										
VFR Approach/Landing: None											
Aircraft Information								•			
Aircraft Manufacturer			Model/					Serial Number			
ROBINSON HELICOPTER			R22 E	3ETA				4114			
Airworthiness Certificate(s): Norm	al										
Landing Gear Type: Skid											
Amateur Built Acft? No	Number of Seats:	Certified	d Max Gross Wt.		LBS Numbe			r of Engines: 1			
Engine Type: Reciprocating	Engine Ma			del/Series: 360-J2A			Rated Power: 145 HP				
- Aircraft Inspection Information											
Type of Last Inspection	Date of Last Inspection Tir			nce Last Insp		Airframe T	otal Time				
100 Hour			07/2009				Но	1543 Hours			
- Emergency Locator Transmitter (ELT) Information										
ELT Installed?/Type	ded in Locating Accident Site? No										
Owner/Operator Information											
Registered Aircraft Owner			Street A	ddress							
NOBLE TREVOR B		City		State	Zip Code						
			WILMINGTO	DE	19801-1105						
Operator of Aircraft		Street Address									
-		City State Zip C							Zip Code		
Mark James Mahaney		Tahlequah					ОК		74464		
Operator Does Business As:		Operator Designator Code:									
- Type of U.S. Certificate(s) Held:	None										
Air Carrier Operating Certificate(s)	:										
Operating Certificate:				Operator Certifi	cate:						
Regulation Flight Conducted Unde	r: Part 91: Genera	al Aviatio	n								
Type of Flight Operation Conducted	d: Personal										
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	AVIATI	Occurrence Type: Accident												
First Pilot	Information													
Name		City				St	ate	Date of B	irth	Age				
On File				On			-ile			Or	n File	On File		26
Sex: M	Seat Occupied			Certificate Number: On File										
Certificate(Certificate(s): Private													
Airplane Ra	ating(s): None	<u> </u>												
Rotorcraft/0	Glider/LTA: Helio	copter												
Instrument	Rating(s): Non-	<u>е</u>												
Instructor F	ating(s): None	е												
Current Bie	nnial Flight Revie	ew? 07/2009	9											
Medical Ce	rt.: Class 3	Medica	al Cert. Status	s: Without V	Waivers/Lin	nitation	าร		Date o	f Last N	/ledical l	Exam: 04/	2008	
- Flight Tim	- Flight Time Matrix		All A/C This Make and Model		e Airplane gine Mult-Engine		ight	Ins Actual	Instrument stual Simulated		Rotorcraft	Glid	ler	Lighter Than Air
Total Time		85	85 85											
Pilot In Con	nmand(PIC)					\bot								
Instructor						—								
Instruction	Received					\bot								
Last 90 Day	/S					$+\!-\!$								
Last 30 Day						+-						_		
Last 24 Ho		<u> </u>										10 15" 10 11		
Seatbelt Us	ed? Yes	Shou	ılder Harness	Used? Yes			Toxico	logy Perfo	formed? Yes Second Pilot? No					
Flight Pla	n/Itinerary													
Type of Flig	ht Plan Filed: No	one												
Departure Point								Air	port Identifier Depa			arture Time		Time Zone
Tahlequah											0445			CDT
Destination								niA	port Identifier					
Local Flight							ок	K						
Type of Cle	earance: None							•						
Type of Air	space:													
Weather	Information													
Source of	Wx Information:													
	Unkno	wn												
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		Occurrence Type: Accident											
Weather	AVIATION Information												
WOF ID	Observation Time	Time Zone	W	OF Elevation	n	WOF D	WOF Distance From Accid				Direction From Accident Site		
KTQH	0432	CDT		874 Ft.	MSL						4 Deg. Mag.		
Sky/Lowes	st Cloud Condition: Thin		400				t. AGL Condition of L			nt: Night			
Lowest Ce	illing: Overcast		400 Ft. /	4GL	Visib	/isibility: 5		SM	Altimeter:		30.00	"Hg	
Temperature: 13 °C Dew Point:				12 °C	itions at Acc	cident S	Site: Instrum	ent (Conditions				
Wind Direc	ction:	eed: Ca	alm		Wind	d Gusts:							
Visibility (R	RVR): Ft.	Visibility	/ (RVV)		SM								
Precip and Mist	d/or Obscuration:												
Accident	Information												
Aircraft Dar	mage: Destroyed		Aircraft Fire: Ground					Aircraft Exp	losio	n None			
- Injury Su	mmary Matrix	Fatal	Serious	Minor		None	TOTAL	T					
First Pil	lot	1			\perp		1	1					
Second	d Pilot							7					
Studen	it Pilot							7					
Flight In	nstructor							7					
Check I	Pilot							7					
Flight E	Engineer							7					
Cabin /	Attendants							7					
Other C	Crew							7					
Passen	ngers	1						1					
- TOTAL A	ABOARD -	2					1 2	2					
Other G	Ground							7					
- GRANE	O TOTAL -	2					1 2	2					
				•			•						

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Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

Jennifer Rodi

Additional Persons Participating in This Accident/Incident Investigation:

Dan Donnely FAA Flight Standards District Office Oklahoma City, OK

Ken Martin Robinson Helicopter Company Torrance, CA

Troy Helgeson Lycoming Engines CO